

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Reissue Application for )  
U.S. Patent No. 5,870,527 issued February 9, 1999 )  
Inventors: TAKAYUKI FUJIKAWA ET AL. ) Attn: Applications Branch  
Reissue No. (Unassigned) )  
Title: ROBOT CONTROL METHODS AND )  
APPARATUS )

**REISSUE APPLICATION DECLARATION BY THE INVENTORS**

Assistant Commissioner for Patents  
Box NEW REISSUE APPLICATION  
Washington, D.C. 20231

Sir:

As a below named inventor, I hereby declare that:

1. My residence, post office address and citizenship are stated below next to my name.
2. I believe I am an original, first and joint inventor of the subject matter which is described and claimed in U.S. Patent No. 5,870,527, granted February 9, 1999, and for which a reissue patent is sought on the invention entitled "ROBOT CONTROL METHODS AND APPARATUS," the amended specification and claims of which are attached hereto.
3. I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by the Preliminary Amendment being filed herewith.

4. I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

5. I hereby claim foreign priority benefits under 35 U.S.C. 119 of Japanese Patent Application No. P07-268422 filed on October 17, 1995. I further state that no foreign applications for patent or inventor's certificate were filed having a filing date before that of the above-identified application on which priority is claimed.

6. I verily believe the original patent to be partly inoperative or invalid by reason of a defective specification, and by reason of the patentee claiming more or less than he had the right to claim in the patent.

7. At least one error upon which reissue is based is described as follows: Claim 3 of the '527 patent recites "a self operational arc" which is also recited in claim 1 from which claim 3 depends. As a result, claims 1 and 3 are inconsistent with each other, which may render the scope of these claims indefinite and at least partly inoperative or invalid under 35 U.S.C. 112. The limitation in claim 3 should be amended as shown in the Preliminary Amendment accompanying this reissue application to correct this error.

8. Another error upon which reissue is based is described as follows: Claim 4 of the '527 patent recites, in the last paragraph, "said self operational arc" and "said transition in state," neither of which phrases appears to have a clear antecedent basis in the claim. Moreover, claim 5 of the '527 patent recites "a self operational arc" which is also recited in claim 4 from which claim 5 depends. For these reasons, claims 4 and 5 may be indefinite and at least partly

inoperative or invalid under 35 U.S.C. 112. Claims 4 and 5 should be amended as shown in the Preliminary Amendment accompanying this reissue application to correct this error.

9. Another error upon which reissue is based is described as follows: The '527 patent was issued with method claims (claims 1 to 3) and apparatus claims (claims 4 and 5), but did not include any article of manufacture claims reciting the disclosed invention as a functional program stored on a computer-readable medium. The failure to include such claims, particularly where the claims correspond to the method and/or apparatus claims in the '527 patent, provides another basis for this reissue application. See M.P.E.P. Section 1412.02. To correct this error, new claims 6 to 8 have been added, which are drawn to this statutory category of invention. New claim 6 recites a computer-readable medium containing a program for controlling the operation of a robot, wherein the program comprises essentially the same steps recited in claim 1 of the '527 patent. New claims 7 and 8 each recite a recording medium having recorded thereon a program for controlling a robot.

10. Another error upon which reissue is based is described as follows: The '527 patent was issued with claims drawn to a "robot control method" (claims 1 to 3) and claims drawn to a "robot control apparatus" (claims 4 and 5), but did not include any claims drawn to a "robot for performing predetermined operations." The failure to include such claims resulted in the Applicants claiming less than they had a right to claim in the '527 patent, and therefore, provides another basis for this reissue application. To correct this error, new claims 11 to 15 have been added, which are drawn to this aspect of the Applicants' invention.

11. Another error upon which reissue is based is described as follows: The claims of the '527 patent are narrower than what was required to patentably distinguish the Applicants' invention from the prior art. Specifically, the limitation of a "self operational arc" was not necessary to distinguish the Applicants' invention from the prior art. As a result, the Applicants claimed less than they had a right to claim in the '527 patent. To correct this error, new claims 7 to 18 have been added to claim additional subject matter to which the Applicants are believed to be entitled. Claims 7 to 18 are broader in some aspects, and narrower in some aspects, as compared to the issued claims of the '527 patent.

12. This reissue application also includes certain amendments to correct typographical and grammatical errors of a minor nature in the '527 patent. These amendments include: in column 4, line 53, "conntrol" has been changed to --control--; in column 8, line 62, "unifoorm" has been changed to --uniform--; in column 9, line 31, "determined" has been changed to -- determined--; and in column 10, line 44, "matter" has been changed to --matters--. The specification was also amended to clarify an antecedent basis in the description section of the specification as follows: in column 4, line 62, the phrase --as an operational state model-- has been inserted after "status transition chart" to provide antecedent basis for the same phrase used in the claims; and in column 9, line 42, the term --self-- has been inserted before "operational" to provide antecedent basis for the "self operational arc" recited in claims 1 and 4.

13. All errors which are being corrected in the present reissue application up to the time of filing this declaration arose without any deceptive intention on the part of the applicants.

14. As a named inventor, I hereby appoint the following attorneys and agents to prosecute this application and transact all business in the U.S. Patent & Trademark Office connected therewith:

John E. McGarry	22,360	Joel E. Bair	33,356
H. Lawrence Smith	24,900	Richard D. Grauer	22,388
Ralph T. Rader	28,772	Michael D. Fishman	31,951
Joseph V. Coppola, Sr.	33,373	Mark A. Davis	37,118
Michael B. Stewart	36,018	Stefan V. Chemielewski	39,914
Alexander D. Rabinovich	37,425	Kristin L. Murphy	41,212
Kevin D. Rutherford	40,412	David K. Benson	42,314
Glenn E. Forbis	40,610	Christopher M. Tanner	41,518
Ronald P. Kananen	24,104	Robert S. Green	41,800
Matthew J. Russo	41,282	Brian K. Dutton	47,255
G. Thomas Williams	42,228	Jeffrey L. Thompson	37,025

15. All communications about this application should be directed to:

**Ronald P. Kananen, Esq.**  
RADER, FISHMAN & GRAUER PLLC  
1233 20th Street, N.W., Suite 501  
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16. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and imprisonment, or both, under 18 U.S.C. 1001, and that such willful

Docket No. SON-995/REISSUE  
Serial No. (Unassigned)

REISSUE APPLICATION

false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this declaration is directed.

Signature: Takayuki Fujikawa  
Name: Takayuki Fujikawa  
Residence: Kanagawa, Japan  
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Date: Feb. 05 2001

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Date: Feb. 05, 2001

SON-995/REISSUE

REISSUE APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Reissue Application for )  
U.S. Patent No. 5,870,527 issued February 9, 1999 )  
Inventors: TAKAYUKI FUJIKAWA ET AL. )  
Reissue No. (Unassigned) ) Attn: Applications Branch  
Title: ROBOT CONTROL METHODS AND APPARATUS )

STATEMENT UNDER 37 CFR 3.73(b)

Assistant Commissioner for Patents  
Box NEW REISSUE APPLICATION  
Washington, D.C. 20231

Sir:

Sony Corporation, a corporation of Tokyo, Japan, states that it is the assignee of the entire right, title, and interest in U.S. Patent No. 5,870,527, which issued on February 9, 1999, for an invention titled "ROBOT CONTROL METHODS AND APPARATUS."

Sony Corporation is the assignee of said patent by virtue of an assignment from the inventors of the patent, which was recorded in the U.S. Patent & Trademark Office at Reel 8415, Frame 0836. A copy of the assignment is attached.

The undersigned, whose title is supplied below, is empowered to sign this statement on behalf of the assignee.

SONY CORPORATION

Date: Feb. 5, 2001

By:

Yujiro Yamana

Name: YUJIRO YAMANAKA

Title: MANAGER  
LEGAL & INTELLECTUAL PROPERTY DEPT.

## ASSIGNMENT

WHEREAS, I, as a below named inventor, residing at the address stated next to my name, am a sole inventor (if only one name is listed below) or a joint inventor (if plural names are listed below) of certain new and useful improvements in  
ROBOT CONTROL METHODS AND APPARATUS

for which application for Letters Patent of the United States of America was executed by me on the date indicated next to my name and address;

AND WHEREAS, Sony Corporation, a Japanese corporation with offices at 7-35 Kitashinagawa 6-Chome, Shinagawa-Ku, Tokyo, Japan, (hereinafter referenced as ASSIGNEE) is desirous of acquiring all interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar legal protection which may be granted therefor in the United States and in any and all foreign countries;

NOW THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, as a sole or joint inventor as indicated below, by these presents do hereby assign, sell and transfer unto the said ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in the said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said invention, and in and to any all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and to any other benefits accruing or to accrue to me with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto, and I hereby authorize and request the Commissioner of Patents to issue the said United States Letters Patent to said ASSIGNEE, as the assignee of the whole right, title and interest thereto;

And I further agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE or its designee, as ASSIGNEE or its successors, assigns and legal representatives may from time-to-time present to me and without further remuneration, in order to perfect title in said invention, modifications, and improvements in said invention, applications and Letters Patent of the United States and countries foreign thereto;

And I further agree to properly execute and deliver and without further remuneration, such necessary or desirable and lawful papers for application for foreign patents, for filing subdivisions of said application for patent, and or, for obtaining any reissue or reissues of any Letters Patent which may be granted for my aforesaid invention, as the ASSIGNEE thereof shall hereafter require and prepare at its own expense;

And I further agree that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to me and will testify as to the same in any interference or litigation related thereto;

And I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale.

And I hereby authorize and request my attorney(s) of record in this application to insert the serial number and filing date of this application in the spaces that follow: Serial Number:08/730.934, Filing Date: 10/16/96.

This assignment executed on the dates indicated below.

TAKAYUKI FUJIKAWA

1/28/97

Name of first or sole inventor

Execution date of U.S. Patent Application

Kanagawa, Japan

Residence of first or sole inventor

Takayuki Fujikawa

1/28/97

Signature of first or sole inventor

Date of this assignment

MASAHIRO FUJITA

Name of second joint inventor

2/3/97

Execution date of U.S. Patent Application

Saitama, Japan

Residence of second joint inventor

Masahiro Fujita

Signature of second joint inventor

2/3/97

Date of this assignment

Name of third joint inventor

Execution date of U.S. Patent Application

Residence of third joint inventor

Signature of third joint inventor

Date of this assignment

Name of fourth joint inventor

Execution date of U.S. Patent Application

Residence of fourth joint inventor

Signature of fourth joint inventor

Date of this assignment

Name of fifth joint inventor

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Residence of fifth joint inventor

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Name of sixth joint inventor

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Signature of sixth joint inventor

Date of this assignment